1	IN THE UNITED STATES DISTRICT COURT
2	FOR THE EASTERN DISTRICT OF TEXAS
3	TYLER DIVISION
4	LONE STAR TECHNOLOGICAL)(
5	INNOVATIONS, LLC.)(CIVIL DOCKET NO.
6)(6:15-CV-00973-JRG-JDL
7	vs.)(TYLER, TEXAS
8) (
9	ACER, INC.)(
10	ET AL)(NOVEMBER 10, 2016
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12	
13	CLAIM CONSTRUCTION HEARING
14	BEFORE THE HONORABLE JUDGE JOHN D. LOVE
15	UNITED STATES MAGISTRATE
16	
17	APPEARANCES:
18	FOR THE PLAINTIFF: (See sign-in sheets docketed in minutes of this hearing.)
19	
20	FOR THE DEFENDANT: (See sign-in sheets docketed in minutes of this hearing.)
21	
22	
23	COURT REPORTER: Ms. Tammy L. Goolsby, CSR
24	Proceedings taken by Machine Stenotype; transcript was produced by a Computer
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COURT SECURITY OFFICER: All rise. 1 2 THE COURT: Please be seated. The clerk may call the 3 case. COURT CLERK: The clerk calls Case 6:15-cv-972, Lone 4 5 Star Technological Innovations, LLC. versus Sharp Electronics 6 Corporation. 7 THE COURT: Announcements? MR. SABA: Good morning, Your Honor. John Saba with 8 Plaintiff Lone Star Technological Innovations, LLC., and with 9 10 me co-counsel John Lee and Mr. Brad Little, who is the general counsel of Plaintiff. 11 12 THE COURT: All right. Thank you. 13 MR. BUNT: Good morning, Your Honor. Chris Bunt here 14 on behalf of Sharp Electronics Corporation. Also with me today 15 is Mr. David Sipiora and Mr. Matthew Holohan from the 16 Kilpatrick, Townsend & Stockton Law Firm, and we're ready to 17 proceed. 18 MR. CRAFT: Good morning, Your Honor. Behind the 19 pole here, Brian Craft and Michael Ting on behalf of Acer 20 Defendants. THE COURT: Okay. Let me first hear from -- we're 21 22 here for Claim Construction Hearing obviously. 23 Let me first just make mention of the fact that just 24 for my clarification of how we're going to proceed this 25 morning, as you know the Court issued an order last week

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inviting the opportunity for more junior lawyers to present argument in this Claim Construction Hearing. Let me ask if there's any junior lawyers from either side to be presenting, first from the Plaintiff? MR. SABA: None from the Plaintiff's side, Your Honor. THE COURT: Defense? MR. HOLOHAN: None, Your Honor. THE COURT: All right. You have two hours for argument then, so each side an hour, so do keep that in mind as we proceed. What -- as you may be aware, you received this morning a chart that contains the Court's proposed preliminary constructions in the last column, so we'll just begin with argument on the first term. My approach to Claim Construction Hearing procedure is for the parties to present a chart that is prioritized by the importance of the term to one or both sides. I'm not sure if that's what I have here, to be honest. This is -- we're proceeding under Judge Gilstrap's procedure, and I don't know how he conducts his hearings. So what I'm saying is that I'm assuming that we're beginning with the most important term in this chart, Set of individual color look-up tables. If we are not, in your two hours you have I want to get to the most important terms.

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I want those to go first, and if there's some less important term that perhaps we don't get to or don't have a lot of time for, it wouldn't be that important. I don't want the last terms to be saved -- or the most important terms to be saved for last. So let me ask about that. I would say what I would typically do is we begin with set of individual color look-up tables as the most important term to one or both sides in the chart, and we just begin argument on the Court's proposed construction. In other words, if you're happy with the Court's proposed construction, I don't expect you to argue. If you're unhappy with it, you can argue, tell me why I'm wrong, and the other side can respond. Of course, if neither side is happy with it, then, you know, y'all can just -- one side go and the other side go. It doesn't matter to me. We'll go back and forth on that term until we've completed argument on it. So to that end, let me first ask if there's a different set of order of terms the parties would like to take up in this chart. MR. SABA: Your Honor, can we have just a second to confer? THE COURT: Sure. MR. SABA: Thank you.

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THE COURT: All right. Ready to proceed? MR. SABA: Yes, Your Honor. And to answer the Court's question, we conferred with the Defendants, and I think the priority would be individual look-up tables first and then going to individual color. This would be claim term five, then characterization claim term six, the remaining disputed terms in the order after that, if that so pleases the Court. THE COURT: That's fine. So the first term to argue would be set of individual color look-up tables, which is number one in the chart. MR. SABA: That's correct, Your Honor, and I think it would probably be appropriate for the Defendants to start --THE COURT: That's fine. MR. SABA: -- and we'll reserve for rebuttal. THE COURT: Yes, that's fine. Counsel for the Defendant? MR. TING: Good morning, Your Honor. THE COURT: Good morning. MR. TING: May it please the Court, my name is Michael Ting on behalf of the Acer Defendants. So if we go to slide three, so with respect to this term, Your Honor, the Defendants would submit that the term a set of individual color look-up tables is indefinite. It includes the indefinite term individual color.

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However, if the Court is inclined to find that individual color is definite, Defendants submit that the proper construction for this term would be a set of tables each mapping an input individual color to an output individual color.

And looking at slide five, the '012 patent provides a clear definition of the look-up tables, which is contained at column five, lines one through seven, reproduced here.

Not only is the Defendants' construction supported by the intrinsic evidence. It is also supported by the extrinsic evidence. Defendants' expert Dr. Richardson states in his declaration at paragraph 21 that a person of ordinary skill in the art would have understood that each look-up table or LUT operates on a specific color.

A LUT would be set to receive a particular input color and to output a particular output color. In this sense, the input color is mapped to the output color because each output color produced by the look-up table is in response to a particular input color.

And if we see also from the Electric Imaging

Technology, color mapping or pseudocoloring, color mapping maps
data to colors. Most often the mapping is applied to scalar
data, but schemes exist to map multiple variables to different
components of color.

Plaintiff's expert Dr. Menczel during his deposition

was asked, "Okay. But the look-up tables are used to map an input color to an output individual color, correct?" And he responds, "In a complex way."

Later in his deposition, Dr. Menczel attempts to backtrack, but in doing so, we realize that he is at best unclear as to what his understanding of mapping is in terms of this claim term.

Plaintiffs also offer some confusing arguments against the Defendants' proposed construction. First, in their opening claim construction brief, the Plaintiff's argue that look-up tables are too simple for Defendants' construction, as seen in the highlighted portion. They also go on to argue that look-up tables are too complex to use the word mapping.

And if we look at the right side bottom, quoting Dr.

Menczel's deposition, they state, "The four look-up tables
described above contain complex formulas which far exceed
simply 'mapping an input color to an output individual color.'"

Now, in his deposition Dr. Menczel admitted that his understanding of the function and definition of the look-up tables in the context of the '012 patent was incorrect.

First asked -- he was asked to confirm his statement in his declaration that the four look-up tables that contain complex formulas far exceed simply mapping an input color to an output individual color, and he agreed.

Now, when asked to confirm again if it's his opinion

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that the complex formulas are part of the look-up table, he said no for the first time and stated, in fact, that the look-up tables are used as part of the formulas, not the other way around.

Let's go to slide 11. Plaintiffs also make the argument that the Defendants' proposed construction is improper because it relies on the only embodiment in the '012 patent.

Slide -- next slide. Now, in the reply brief,

Plaintiffs rely on Innova/Pure Water, which states, "Even where
a patient describes only a single embodiment, claims will not
be read restrictively unless the patentee has demonstrated a
clear intention to limit the patent scope using words of
manifest exclusion or restriction."

This is what is happening in the '012 patent. In the '012 patent at column one, lines 59 through 65, which is not being discussed in the context of the preferred embodiment, the patentee writes, "The present invention features a unique method of using simple Look-up Tables, whose values are calculated from uniquely defined color control functions, to digitally increase or decrease the saturation of a single color of the chromatic part of a video image, e.g., CrCb, UV, or IQ, without affecting saturations of the remaining colors of the chromatic part of the same video image."

This is significant in that by characterizing the present invention as a unique method of using simple look-up

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tables, what the patentee has done is they have provided a clear intention to limit the claims scope to this only embodiment presented in the patent. Now, Plaintiffs have first taken the position that the terms should be given its plain and ordinary meaning; however, they offer no support for their position and offer very little to no explanation. Now, in terms of Plaintiff's alternative construction, which is that a set of individual color look-up tables is a set of individual color arrays or tables of value, this construction should be rejected as the Plaintiffs have offered no intrinsic support for this proposed construction, and rather --THE COURT: Let me -- let me stop you there, so let's go to the claim itself. MR. TING: Okay. THE COURT: So the term is a set of individual color look-up tables. That's what we're -- the Court's being asked to construe here. MR. TING: Correct. THE COURT: And so where you find that saying claim one of the '012 patent is in Step D; is that correct? MR. TING: Yes, Your Honor. If you look at the screen, the term a set of individual color look-up tables, actually there's several times, and you're correct. The first

time it appears is Step D. 1 2 THE COURT: Okay. So what you're telling me is this should be defined as each mapping an individual -- individual 3 4 color to an output of individual color. 5 Now, first of all, how does that fit into this claim? We've got a term that's individual color look-up tables, and 6 7 now you're having that table map an input color to an output color, so what does that do to the claim? How does it work? 8 9 MR. TING: So it would work by, for example, in 10 Element D, for example, it would be defining a set of tables, each mapping an input individual color to an output individual 11 12 color. 13 THE COURT: According to an individual color? 14 MR. TING: That is correct, Your Honor. 15 Now, the reason that, you know, the individual color 16 appears, you know, twice and may cause you some hesitancy, Your 17 Honor, is because each of the look-up tables is created based 18 on a specific color. Every color is given its own look-up 19 table. 20 THE COURT: Well, I don't see mapping anywhere in the claim, so -- so now you've got it mapping. You've got it 21 22 designing. You've got it inserting. You've got it 23 determining. You've got it displaying, and you're going to 24 have it mapping here. 25 I just don't see mapping anywhere in here, and I'm

just interested as to why that needs to be inserted into the 1 2 claim. MR. TING: Sure, Your Honor. If we can go back to 3 4 slide five, so the definition provided in column five, lines 5 one through seven, states that the look-up tables are defined such that each of the output image chromatic components, Cr' 6 7 and Cb', is related to the both input image chromatic components, Cr and Cb, and correspondingly each of the output 8 9 chromatic pixel values Cr' at coordinates i, j and Cb' at 10 coordinates i,j is related to both input image chromatic pixels values Cr(i,j) and Cb(i,j). 11 12 So what's happening with these look-up tables, Your 13 Honor, is that they oversee the specific input, and that input 14 will be chromatic components Cr and Cb, and those will be mapped to output chromatic components. 15 The input Cr and Cb are the chromatic components of a 16 color, Your Honor, and thus the input information is data, 17 18 which is a color. The output is a change is a different color. 19 It's whatever has been adjusted creates a -- say, for example, 20 if you're adjusting orange, Your Honor, you might adjust the saturation of orange up or down and receive a new color. 21 22 For -- the key here is for any given input, there will be one 23 specific output. 24 Now, if we go to the next slide -- my apologies if I 25 rushed through this the first time, Your Honor -- the

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relationship of -- the relation between the input image chromatic components and the output image chromatic components is known to those of ordinary skill in the art as color mapping. It is showing the relationship between a given input and the corresponding output, and this is why we have -- this is why the Defendants' construction use the word mapping. Thank you, Your Honor. THE COURT: All right. Thank you. MR. SABA: Good morning, Your Honor. Just a few points. THE COURT: Okay. Go ahead. MR. SABA: Your Honor, just a few points on the plain and ordinary meaning. I understand that the Court's proposed construction, this will take just -- I wanted to highlight just a few things. First, the '012 patent specification at column one, lines 59 to 65 that I believe Mr. Ting had referenced, this specifies the present invention features a unique method of using simple look-up tables whose values are calculated from uniquely defined color control functions. Simple in this regard is operative in that while a simple look-up table, that being a table or array of values is used in the process of color control, you know, the unique methods around how colors change specifically color control

functions can vary.

So we agree with the Court's proposed construction that simple look-up tables, you know, would be the definition that one of skill in the art would assume. It's used no differently throughout the claims, and that is a table of -- a table or an array of values.

In our opening brief, our expert Dr. Menczel had explained that a person of skill in the art would understand look-up table in this manner and also provided extrinsic evidence that the IEEE dictionary that is consistent with the term that the -- with the preliminary construction the Court has proposed.

But more importantly Defendants' expert Dr. Iain
Richardson describes a LUT, as we say in the art, as -- as -in part of his introductory declaration, he described it as, In
computer processing, a look-up table is an array to which
values are input and indexed for retrieval, and so this is --

THE COURT: Let me just -- before we get into the expert here, what the Defendant put up or showed to me was a quote from the specification when I asked where's mapping fit into this, because this is what this comes down to in this particular term, right, mapping? The Defendant believes that these tables are mapping.

And I know we have a dispute about individual color, but they want it map and input color and output color, and you

believe that's incorrect? 1 2 MR. SABA: Yes, Your Honor. Let me -- let me cut to 3 the chase. 4 THE COURT: Again, the specification cite is, again, 5 when I asked where's the mapping, he pointed me to that, and he's saying that's what they defined it, this LUT, as being 6 7 mapped. Now they have -- I believe they have an expert which supports that. Respond to the specification cite first. 8 9 MR. SABA: Yes, Your Honor. Thank you. 10 specification citation -- I don't have a slide on this -- is that column five -- the '012 patent, column five, lines one 11 12 through seven. 13 And it describes that LUTs are defined such that each 14 of the output chromatic components Cr and Cb is related to both 15 the input chromatic components Cr and Cb, and to this, the Defendants make the leap that that somehow means mapping. 16 17 Well, first, this is a preferred embodiment, and it's 18 described accordingly in the specification, and so to -- to 19 import this description into the proposed construction of 20 look-up table would be improper. But second -- and I think Your Honor had alluded to 21 22 this earlier. John, can you put up claim -- or page 18 for me? 23 The claims themselves instruct how the look-up table is used, 24 and it's described as the preamble method of selectively 25 controlling an individual color, the steps of receiving,

characterizing, selecting the individual color, and then 1 defining a set of individual color look-up tables, which we've 2 3 discussed briefly. 4 And then values are assigned -- pardon me. And then 5 Step G, the claims teach that the look-up tables are -- are -their values are inserted into -- excuse me -- inserting 6 initial values into said look-up tables and then determining 7 new values of said set of individual color look-up tables. 8 9 So the claims themselves -- claim one -- and claim 10 one is explicit in what is to be populated in the individual look-up table, and it is our position that that is not mapping. 11 And so -- and in the Plaintiff's -- in the briefing 12 13 before the Court, in the expert declaration of Defendants -- in 14 Defendants -- well, Defendants' expert declaration, the 15 Defendants cite the previous passage in the specification that talks about relating components and then makes the leap without 16 17 support to mapping. 18 So our position, I guess, Your Honor, is mapping is 19 not supported by the specifications, and it certainly is not 20 supported by the claims because the claims teach it explicitly. THE COURT: Okay. So just draw for me the 21 22 distinction between in your mind from what they're talking 23 about and mapping and what -- what's going on here. 24 MR. SABA: This is -- this is hard to articulate, but 25 what I believe the -- the specification reference is talking

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about, as cited earlier, the relating to, is it takes color
components from one individual color as -- as it's related to
an input -- let me get my -- that the values are stored in the
look-up tables are operated on by the color control functions
in an effort to -- well, in an effort to -- that the look-up
tables contain values that are rendered or of a function of the
color control functions in changing chromatic components in
this specific embodiment of the -- of the patented invention.
          But it's not a mapping of -- of necessarily X to Y.
It's -- it's -- it is controlling the color and populating the
look-up tables with those values.
          I don't think I did a very good job of articulating
that, but I -- I can come back to the Court on this later.
          THE COURT: Well, I guess what you're saying is that,
first of all, you're saying what they're talking about in
column five is preferred embodiment.
         MR. SABA: Correct.
          THE COURT: Now, I guess are you telling me that,
yes, in the technical sense what's being discussed here is what
is known in the art as mapping, but what's claimed is not so
narrow that it's -- it's characterized here as assigning and
there are other, you know, mechanisms, other ways in which
these values can be matched up or input and output.
          Is that -- is that -- am I correct in saying that is
what's known in the art as mapping?
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MR. SABA: I would not say that it is known -that -- I'll -- but useful look-up tables known in the art as mapping in this regards, Your Honor, for the plain reason that as a practical matter a look-up table can contain a color reference value, and that, in itself, is not a map to anything. It's just a reference and how a look-up table is used. So in the art, look-up tables are used in programming and display technology so that the processor doesn't have to perform one additional step. It's just -- it's a reference table, but to say that it's only mapping would be to narrow the claim when the claim itself is explicit. As you said, that -- it teaches you how the look-up table is used, just assigned values. Whether or not it maps or not is not -- is not how -- how it would be used as plain and ordinary meaning. THE COURT: Okay. All right. Anything else on this? MR. SABA: No, thank you, Your Honor. THE COURT: All right. Defendant, anything else on this? MR. TING: If I can have a brief --THE COURT: Just briefly. I guess, you know, Mr. Ting, it comes down to I'm not necessarily disagreeing in the sense perhaps that what's discussed in part, at least, maybe is known in the art mapping, but are you proposing something here that's simply too narrow preferred embodiment?

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You're taking something discussed in the contents of the part of embodiment and importing that into the claim which doesn't talk about it and is more broadly set forth.

MR. TING: So I'll address that point, Your Honor.

First, you know, as the initial matter, we do not believe we're actually importing a limitation from the preferred embodiment. It happens that the definition that's given for look-up table in the patent occurs during discussion of the only embodiment.

Now, the point we were making with respect to the patentee choosing to ever close everything else was in response to their argument that we were, in fact, trying to carry out --carry in a limitation from the preferred embodiment into the claim.

Now, even if we were importing a limitation from the preferred embodiment, we would -- we submit that it would be allowed based on the statements made in the patent specification by the patentee.

Now, part of the criticism I heard about our construction from counsel was that we are taking it too narrow and we are in a sense over-narrowing the term. That is not what we're doing, Your Honor.

A look-up table under our construction still would contain values. It's just our construction reflects the function of the look-up tables as used in the unique method

disclosed in the '012 patent, which is to help convert and change an input color into an output color.

And that is what we consider mapping, Your Honor, because these look-up tables, if you put in a specific set of chromatic components in, you will get a specific output, which is a color, and that's the concept that we're trying to capture here, and we do not believe that this is duplicative at all of what is stated in claim one.

For example, Your Honor, as they pointed out in G, there is inserting initial values into the said individual color look-up tables, there's determining new values in said set of individual color look-up tables.

But what is not being captured here and what the patents defined is that it's the initial color look-up table that receives an input of color components and outputs as a result a new color in terms of a change in saturation.

THE COURT: Okay. Let me ask -- this will probably be the last point and move on, but, you know, in looking at the claim, and particularly looking at -- going back to figure one in the '012 patent, there is step three, which talks about defining the fine sets of color look-up tables; and then there's step eight, calculating and assigning values to the output video image featuring the new chromatic components.

So -- and that goes somewhat to what I'm talking about in the claim here. Step eight is calculate and assign,

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and so are we, you know, inserting into -- this goes along with
what I asked earlier -- into the concept of the look-up tables
this mapping functionality that is really called out in, for
example, step eight and other steps of the claim itself?
         MR. TING: No, it's not, Your Honor. It's -- what's
happening here in step eight is -- step eight would be the
output, Your Honor, and that is based on, you know, the values
that are put into the look-up table and it's what's going to
come out of the look-up table.
         But the core idea here is that the look-up table
itself is receiving input chromatic components and mapping
those to a set of output color components.
          THE COURT: Okay. Anything else?
         MR. TING: No.
          THE COURT: All right. Let's move on to the next
term, which is individual color control functions.
         MR. HOLOHAN: Good morning, Your Honor. Matthew
Holohan for Defendant Sharp Electronics Corporation.
          So, Your Honor, regarding individual color, to
understand the context for this discussion, I think it's useful
to draw a distinction between a color and a color component.
It's a distinction that's very well known in the art and sort
of lost, unfortunately, in the specifications of the '012 and
the '435 patents.
          So if you look at slide 59 from the Defendants' claim
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construction presentation, you can see that there is an illustration of a color and how colors are formed from color components. On the left-hand side, there's this picture of a barn against the mountain and you can see there's all different There's various shades of blue in the sky, there's gray in the mountains, there's various shades of brown in the barn and green in the grass. And then if you look at the right-hand side, you can see that every one of those individual colors in the final picture is actually a combination of specific values of red, green, and blue, so you choose your values of red, green, and blue, and you combine them to make the ultimate individual color that you want to express. So in the specific --THE COURT: So we are on individual colors; correct? MR. HOLOHAN: Yes, Your Honor. THE COURT: Okay. Go ahead. MR. HOLOHAN: If we go back to slide 56, as we mentioned in our brief, the two patents contain nearly identical lexicographic definitions of individual color involved, saying the individual color is a lineal combination of the base colors, and the base colors can be red, green, blue, or complimentary colors yellow, cyan, and magenta. Now, in the Plaintiff's brief, they seem to suggest

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that those base colors themselves are the individual color, which is problematic right out of the gate because you can see that that leads to a circular definition. If you -- the individual color red is like linear combination of red, green, blue, and yellow, cyan, magenta. It's just red. So from that point reading the specification and trying to make sense of what the patentee ostensibly invented, it's completely unclear to a person of ordinary skill in the art what the invention is trying to accomplish here. And I think that becomes quite clear in the testimony of Plaintiff's expert Dr. Menczel, if you go to slide 62. specifications of both patents extol the virtues of changing a single color and not changing the other colors. And Dr. Menczel in his deposition said, well, red and orange can be the same color. I can change red and also change orange if you define red to include orange. Well, that completely vitiates the purpose of the -- of the invention. If you go to the next slide, Dr. Menczel said the '012 and the '435 patents do not give the way how to divide the colors, where is the line. The patents provide no guidance as to where you draw the line in the broad spectrum of possible colors to define what your individual color is. To define the range in which I'm only changing colors within this band, I'm not changing any other, quote, unquote,

individual colors. And without that quidance, you can simply

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define individual color to be the full spectrum of colors. You may can change the video display, you change every single color, and that somehow meets the claims.

So a person of ordinary skill in the art looking into the claims of these patents would not know the metes and bounds, would not know the conduct that is within the claims and the conduct that is outside the claims.

And in regards to the specific -- to the Court's preliminary construction, the Plaintiffs had proposed as their primary proposed construction a range of values of particular color and explained -- we explained in our brief and I explained just now why an individual color can't have a range. Individual color components have ranges, and you choose values within those ranges to construct your individual color.

The Plaintiff's alternative definition, which has been preliminary adopted by the Court, is linear combinations of color components. Well, that's problematic as well because if we go back to slide 56 again, the specific definition of the patent is not linear combinations, it's a linear combination.

And that's why the Defendants provided the word specific in their construction to make clear that based on the very clear language in the specification linear color is a combination -- I'm sorry -- an individual color is a linear combination of base colors.

THE COURT: Well, let me ask about that. At column

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12, line 57 in the '012 patent, it does seem to refer to linear combinations.

MR. HOLOHAN: So, Your Honor, those are expressed as linear. Okay. So if we go back to slide 59, the passage you just referred to is referring to the RGB space and the Y -- called YCrCb space.

Dr. Richardson in his declaration explains how those two spaces operate, and I'm reading from paragraph seven of his declaration. He says as he explained in his textbook that he wrote, each chromatic component CrCb is a difference between a base color red or blue and aluminates or a weighted average of the three base colors red, green, and blue.

So that passage in column 12 is referring to the -- and, again, this is where it's sort of -- these are the chromatic parts Cr and Cb of the individual color components red, green, blue, yellow, magenta, and cyan.

So the -- the color component red, if you look at the complete universe of the color red in video display, that covers a range of values. There are different shades of red, and those values can be expressed as combinations of the CrCb chromatic components.

But if we take that -- if we go from chromatic component to color component to individual color, by the time you get to individual color, you only have one combination.

There's only one combination that you're dealing with, and

that's clear from the plain definition in the patent. 1 So were the Court inclined to find this claim 2 definite, we think that the Defendants' proposed construction 3 4 is more accurate because it actually captures what the 5 specification says what is that individual color is a single combination of those RGB color components. 6 7 THE COURT: Well, let me ask about that, the definiteness part of this. 8 9 What you seem to be saying is that you just -- for 10 lack of a better way of putting it, just sort of disagree with the idea that you can define individual colors this way, that 11 is these linear combinations. 12 13 I don't think it's that you don't understand it. You 14 just disagree with it from a technical standpoint, that they're 15 just -- just sort of wrong. MR. HOLOHAN: Well, Your Honor, --16 17 THE COURT: And I'm concerned about that being not a 18 definiteness issue, but perhaps some other defensive issue, 19 enablement comes to mind, and so respond to that issue. 20 MR. HOLOHAN: Your Honor, it's not that we disagree that an individual color can be defined as a linear combination 21 22 of base colors, as I think that's -- that's one possible 23 construction. 24 The problem is that starting from that definition in 25 the specification, a person of ordinary skill in the art is

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unable to understand what the invention is and fundamentally, and particularly in light of Dr. Menczel's testimony where he said the individual color can be anything, it can be red and orange together. Presumably it can be red, yellow, and orange together. If you look at the function of the patent claim as a delineation of a property right, a person of ordinary skill in the art needs to know what -- what they're going to do to be inside the claim and outside the claim. And without guidance as to how an individual color is defined and how an individual color as coherently defined can be manipulated in a coherent way, a person of ordinary skill in the art is left ignorant and uninformed as to how to practice the claim, how to avoid the claim, and I believe that is an indefiniteness issue. THE COURT: Okay. So you kind of addressed what I said about -- I asked you about column ten and its reference to linear combination -- column 12, excuse me, and its reference to individual or linear combinations. So I guess -- I know you propose a linear combination, so, say, column one, line 31 through 34, hereinafter an individual color represents a linear combination of these -- of the base colors, whereby the base colors feature red, green, blue, yellow, cyan, and magenta. So respond to me how that -- I guess what you're

saying is it's not so much -- would you concede that they 1 2 appear to be defining the term? MR. HOLOHAN: As I said in our briefs, Your Honor, 3 4 the patentee attempted to define the term, yes. 5 THE COURT: So with that in mind, I quess I understand you're disputing combinations as opposed to 6 7 combination. You're saying that with that definition, the invention -- the bounds of the invention are not sufficiently 8 9 clear. 10 MR. HOLOHAN: Yes, Your Honor. THE COURT: Well, let me ask -- well, hit on that 11 12 point again. Tell me why with that definition the claims --13 these claims are indefinite. 14 MR. HOLOHAN: Well, Your Honor, perhaps the -- I 15 quess we have multiple indefiniteness arguments, and perhaps one of them is more related to that issue. 16 17 As we explained and as the Plaintiff said in their 18 brief, you cannot -- if you adjust red, you're adjusting all 19 shades of red, and there doesn't seem to be a way in the 20 specification to adjust a specific linear combination of colors without adjusting everything else. 21 22 The second argument I think is based on -- is 23 illustrated by Dr. Menczel's testimony that you can define red 24 to include orange, and it doesn't make sense for a linear 25 combination of base colors -- the same linear combination of

1 base colors to be both red and orange. It's one or the other.

THE COURT: Well, let me ask about that, and this goes more to, I guess, just how the accused products, what they are, how they work, how they're -- what specifications they're designed to, how they ship out the door to consumers.

What is the -- what are the specifications on that?

Is there a standard by which these products are developed?

What are we talking about here?

MR. HOLOHAN: Well, Your Honor, unfortunately the specific components at least with respect to Sharp Electronics Corporation, I can't speak to Acers' products, the specific components that actually perform a color management are provided by third party chip suppliers -- actually fourth party technically because Sharp Corporation, which actually does most of the development and designs prior to this case, they're the ones that contract with these other chip suppliers, and we identified those chip suppliers in interrogatory responses.

The actual source code specifications and so on are in the possession of third parties, and they're not in our custody or control. We're not aware of any industry standard specification that requires any particular way of manipulating color. Certainly Plaintiff has not pointed to any such standards. This is not a standards case.

But the Plaintiffs have identified an exemplary implementation in one of the Acer product on pages 13 and 14 of

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the brief where there's a screenshot of some sort of user menu on an Acer product, and the options are to adjust red saturate, green saturate, blue saturate, yellow saturate, magenta saturate, or cyan saturate, so adjustment saturation of any of those six base colors that you combine together to get your individual color. And as described by Plaintiff -- and, again, it's not -- it's not an SEC product, so I can't speak to it. says one desires to change the saturation of the individual color red, and he referred to red here as an individual color, and we disagree that one would select the individual color red, single color and/or one color, and increase the saturation from 50 percent, 53 percent. And then there's the image, and they say the result of increasing the saturation of all shades of red, light red to dark red, without affecting the other, quote, unquote, individual colors, shades of green, magenta. So based on what the Plaintiff is saying here and based on what the Plaintiff has said in their infringement contentions, our understanding of the infringement theory in this case is that simply adjusting any of those six base colors, according to Plaintiff, would meet these claims, notwithstanding the fact that you -- you -- you're necessarily adjusting a color component as opposed to a combination of color components and you're also adjusting a full range of

colors when you do that. 1 2 THE COURT: Well, respond to the concept of ranges. Is that something -- you know, you talked about, well, you 3 know, the expert says in your characterization of it, I guess, 4 5 red can be orange and orange can be red, you know. When you say it that way, it sounds, you know, like, well, that can't 6 7 be. But when we're talking about ranges and, you know, 8 9 when you've got a visual spectrum, you know, expressed in 10 wavelengths and, you know, there's different shades of red and it bleeds into, you know, and there's maybe a range that is 11 12 what's really being talked about here, respond to that idea. 13 MR. HOLOHAN: Yes, Your Honor. Can we go to slide 14 60, please? 15 Your Honor, as near as I can tell from what Dr. Menczel said in his deposition, I think this graphic 16 17 illustrates the two different kind of ranges that we can talk 18 about when we're talking about colors. 19 On the left side is the saturation of color, the base 20 color red, and I think this is what Lone Star was referring to in their brief. You can adjust the saturation all the way down 21 22 to the bottom where it turns black, all the way to the top 23 where it's bright red and anywhere in between. 24 On the right-hand side of this page is the hue

values, and I think what Dr. Menczel was saying is that if you

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have a range of values built around red, and that color wheel on the far right side, I think you can see the sort of cardinal colors, there's pure red, pure green, pure blue, and then they kind of fade into other as you go around the wheel. If you start up at cardinal red at the top, you know, you can define a range that is nothing but, you know, what the human eye would consider red. You can go beyond that and pick up some orange and purple. But based on Dr. Menczel's testimony that the patents don't tell you where to draw the line, you can keep going and pick up yellow, more purple and just keep going. I mean, if -- if the definition is just a range of values, well, the entire wheel is a range of values, and that's what's problematic about Plaintiff's conception of this term. THE COURT: Okay. Anything else? MR. HOLOHAN: I think that covers it for us, Your Honor. THE COURT: Okay. All right. Response? And I quess I want to address a couple of points here. One would be this idea that I just addressed that, of course, that being this range idea and that being essentially indefinite as not sufficiently communicating what an individual color is or means. What's your response to that? MR. SABA: Your Honor, I -- if I could, I think you had asked with regard to that question how the patented

technology is implemented, and I actually have a slide on that. 1 I think that might be helpful if it pleases the Court. 2 THE COURT: Sure, that's fine. 3 MR. SABA: Let me give you a background slide. John, 4 5 slide 28. Thank you. 6 The specification references here that I think you had mentioned earlier, just by way of background, in the '012 7 describes a linear combination of particular chromatic 8 9 components for any number of different colors that can be 10 included in the method, red, green, blue, yellow, magenta, and 11 cyan. 12 And the -- the issue with the way that -- excuse 13 me -- the design choice on how that's implemented is you can 14 have color control on three colors, for instance, red, green, 15 and blue, or you can have color control on six colors, but the 16 claims are broad enough to encompass both. 17 Then you discussed '012 patent, column 12, which 18 talks about the chromatic dynamic range of the colors, which 19 indicates that individual color would be a range and --20 THE COURT: Now, he says individual color components is the problem there. Color components have ranges. Colors do 21 22 not. 23 MR. SABA: Right. I believe that the Court has 24 proposed in the preliminary construction a linear combinations 25 of color components, and that means that, for instance, in an

RGB color format, a linear combination, the color component would be red, green, or blue and any combinations there could get you another color, so that a linear combination of color components would include a range.

And let me get to the -- let me get to the example that I think would be helpful, if you can turn to page 30, John. In the '435 specification at column ten, lines 24 to 32, the specification describes there's an identifying each input pixel having red, R, as the individual color whose hue or saturation was selected to be independently changed.

And then directly beneath that there's an equation that's offered as a preferred embodiment where it is here red, so, for instance, for the individual color red, if an input image pixel value contains the individual color red, the way that this would be evaluated to determine whether or not that pixel contains the individual color is if there is enough red or red is greater than green and red is greater than blue. It's not an equal to. It's a greater than.

So a pixel is identified in the following manner, if you can go to the next slide. For instance, as a preferred --- by implementing the preferred embodiment, if the individual color red is selected to be changed, which would include a range of values of red, up on the right you see, you know, a generic typical controller to change the hue.

Logically the individual color would be identified in

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the color wheel as the range red on the left, so the pie slice out of the color wheel, that would be red, which would include in this instance, just by example, maybe some dark orange, but not all orange, but it's a design choice on how to implement, you know, the range of red so that there's -- so it's not applied in the exact manner.

Then once the individual color red is identified as being changed, the -- the equation we saw in the preceding slide goes through each of the input pixel values on the lower left and determines whether or not the amount of red is -- meets a threshold, and, if so, it's identified as being changed, but only those values that have enough of the red component to be included in the individual color red category and then are outputted on the bottom right-hand corner.

So in this instance the way that the -- if you could turn to page 29, John. Our expert explained that the examples in the specification that individual colors can include red, green, blue, yellow -- sorry I'm going so fast -- yellow, cyan, and magenta, is related to what's called the color cube and color theory.

And it's -- the color cube and color theory is understood it's a three-axis system where a certain number of combinations of colors can be comprised, depending on what color format you may be using in the -- in your device.

But the point here is that an individual color is not

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one specific point on the cube, but rather a corner, so, for instance, blue is not the corner tip of the upper left-hand corner tip of the cube. It's -- it can be a slice as if you were to take a knife and cut off the corner and you would be left with a pyramid. That would be the individual color. It would range from dark blue to light blue as it's --You know, I guess an analogy would be looking -- if you're looking at the rainbow. You would look at the clue and there's no one individual color, but it's a spectrum of color and a spectrum of light. And so that's why we believe that the Court's preliminary construction is consistent with the specification and the claim language taken as a whole, and I think that's all I'm going to say, Your Honor, unless you have any questions. THE COURT: And so when I raised the issue of combinations, the Defendant says, well, no, it's a -- at best it's a specific linear combination, and they say, well, that's how, you know, it's -- they -- column one, for example, a linear combination of the base colors. So is your response to that what you just told me, that is, there's a slice, there's a range, for example, blue; therefore, these combinations of color components is appropriate. MR. SABA: I believe that would be the case, Your I think that it would be easier for a jury to Honor.

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understand if it was combinations because there should be no implication that it's one specific color fire engine red versus red. The individual -- which, you know, would range from light red to dark red.

THE COURT: So in your mind they're saying again these, for lack of a better word putting it boundaries between individual colors are unclear, you know, I guess how blue is blue and how -- you know, they don't have anything to hang their hat on specifically as being blue or red, and so in your mind that's not a hindrance or a barrier to understanding what is claimed here.

MR. SABA: Yes, Your Honor, and let me answer that question by giving you an example. In traditional video displays, my understanding -- and I'm not a technical expert, but my understanding is that a color format is typically characterized in the eight bit depth color space, so for red it would be eight bits, green it would be eight bits, and blue would be eight bits, and that combination can give you, for instance, 16 million colors, which is described to as the color gamut.

But if you use a higher bit depth like you're seeing on some, you know, super high graphic monitors, for instance, you may have a ten bit depth, and that combination would give you I think like 1.2 billion combinations. So in an eight bit world where you have, you know, a smaller color gamut, the

individual colors range would actually be smaller because the 1 2 device is not capable of expressing as many colors. So blue, the individual color blue would have --3 what's the word I'm looking for? Would have less -- would have 4 5 a smaller range than if you were to express an individual color on an eight or ten bit where you have up to 1.2 billion colors, 6 7 but blue is blue. THE COURT: All right. Thank you. 8 9 MR. SABA: Thank you. 10 THE COURT: Anything else? 11 MR. HOLOHAN: Just very briefly, Your Honor. 12 THE COURT: Go ahead. 13 MR. HOLOHAN: Just in terms of a few of the comments 14 that were made, so the specifications cite from the '436 15 specification where it seems to refer to red an individual color being identified in a range, you know, of the red values 16 within this range do something about it. 17 18 There are a few instances in the specification 19 where -- and this is just something I mentioned at the outset 20 of my remarks earlier. The specification tends to disregard and confuse the difference between an individual -- between 21 22 color and color component. That was one of the examples. 23 And in terms of the ranges being known based on 24 implementation, if their position -- excuse me. If their 25 position is that the individual color blue is just all possible

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values of blue from no blue at all to maximum blue, that isn't
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    part of that, that isn't an argument before the Court, and it's
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    completely inconsistent with Dr. Menczel's testimony, which
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    says there is no guidance. You can define blue however you
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    want to.
              And pointing to hypothetical implementations, these
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    eight bit and ten bit implementations, they're not in the
    specification, does not assist one of ordinary skill in the art
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    when the entire purpose of the invention is to control the
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     individual colors and the patent does not explain what an
     individual color is.
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               THE COURT: All right. Thank you.
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              MR. HOLOHAN: Thank you, Your Honor.
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               THE COURT: Okay. What will be the next term?
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              MR. SABA: I believe it's characterizing, Your Honor.
               THE COURT: All right. I'm going to take about a
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    five-minute break and then we'll resume here with
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    characterizing.
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              COURT SECURITY OFFICER: All rise.
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               (Recess taken.)
              COURT SECURITY OFFICER: All rise.
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               THE COURT: Please be seated. All right. We'll
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    begin with characterizing.
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              MR. HOLOHAN: Thank you, Your Honor. I'm going to be
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    brief with this term.
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Defendants' position is that this term is indefinite
as the specification fails to explain what it means by
characterizing. We have outlined in our brief what the
specification of both patents does have to say.
          The '012 patent has various substeps. It's not
really clear how those relate to what characterizing means.
The '435 patent has just a very brief description of it.
Again, not really explaining what it means.
          Plaintiffs have come back with numerous arguments
applying various synonyms to characterizing, out of which
neither provide clarity to the term in terms of the extrinsic
evidence.
          So, Your Honor, our position is that, first of all,
the term characterizing, as Dr. Richardson said, has no
ordinary meaning in the art. The Plaintiff has found some
extrinsic references that use characterizing in particular
ways, and in the specification, as I just said is explained in
our briefs, you know, fail to add any clarity to that term, so
that's our position.
          THE COURT: Response?
                    Nothing further, Your Honor, on this
          MR. SABA:
point.
                      All right. Let's move on to the next
          THE COURT:
term.
                     Thank you, Your Honor. The next term is
          MR. SABA:
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individual color control functions.

THE COURT: All right.

MR. SABA: All right. Your Honor, if we could, I want to take up, to begin with, the claim language itself.

This individual color control functions is contained in claim 1E of the '012 patent, defining a set of individual color control functions according to an individual color for calculating values in said set of individual LUTs.

Then the '012 specification, while referring to a preferred embodiment, goes on to say there is a definition of color control functions to be used for calculating values in each set of individual LUTs. Sets of individual color control functions are subsequently used for digitized selective control of individual colors.

That is the -- that is the definition that the -- or the construction that the Plaintiff has proposed, and in the preliminary -- in the Defendants' proposed construction and the Court's preliminary construction, there contains added language that functions that each operate on linear combinations of values of the input image chromatic components for an individual color.

And it is -- it is Plaintiff's position that the support for that is from a preferred embodiment and would be -- it would be improper to include that, the last half of this definition, because it would be importing the description from

the preferred embodiment in the claim itself to narrow it.

And this is highlighted by -- if you could go to the next slide, John. Thank you -- by dependent three of the '012. Dependent three of the '012 recites whereby the method of claim one, whereby each individual LUTs of set of individual color look-up tables is a function of values of pixels of chromatic components of the digital video input image, said chromatic components of the digital video input image having chromatic dynamic range.

And so the -- the Defendants' proposed construction of this is already claimed in independent three, which our position is dependent three would capture the preferred embodiment.

The reference to functions of values in claim one as recited by claim three is, I guess, the way -- the way to understand it in light of the specifications that you have look-up tables that can store values, but you have the color control functions which can contain a number of different algorithms, methods, that calculate values to be placed in the individual color look-up tables, and dependent three is talking about a specific format of those values.

And so our position -- Plaintiff's position would be that including language that it necessarily be input image chromatic components for an individual color would narrow claim one and put it at odds with claim three.

THE COURT: Well, you may have touched on this, but 1 2 specifically I -- what I'm looking at here is column 1, 59 3 through 65. 4 The present invention features a unique method of 5 using simple look-up tables, et cetera, and its referring -we're talking about color control functions. It talks about the chromatic part of a video image. And so this, at least at 7 this point, was my conclusion that this term should be defined 9 at least in part or is including chromatic components. 10 So your response -- and, again, the -- it's not a preferred embodiment. It's a present invention, and that's my 11 12 concern, that that term has been defined in such a way as 13 including chromatic components, so respond to that. 14 MR. SABA: Yes, Your Honor. I'm trying to find the citation in the specification that talks about the color format, if you can give me just one second and let me --17 Your Honor, if I could direct the Court's attention 18 to column three, lines 50, it's the first paragraph under 19 description of preferred embodiments where the specification 20 says the present invention is a method of selective color control of digital video images. 21 22 For purposes of illustration, the following

description of preferred embodiments to the present invention

video image, but that the method of the present invention is

focuses on the CrCb format of the chromatic part of the digital

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applicable to other formats.

And so it is our position that -- it is our position that this is -- the reference is regarding the YCrCb format as specified by the -- or described by the preferred embodiment in the patent and that it would be improper to limit claim one to exclusively teach to that format and no others.

THE COURT: Okay. And it says the method of the present invention is applicable to other formats such as UV and -- or IQ of a digital video image.

So you're saying there's a -- this chromatic concept or idea is part of the YCrCb color space, not necessarily other color spaces that this invention can be applicable to?

MR. SABA: That's correct, Your Honor.

THE COURT: All right. Response?

MR. TING: So, Your Honor, I'd like to begin by directly addressing Plaintiff's argument that somehow our construction is limited to the YCrCb color space.

If we look at slide 19, we can see they make this argument in their opening claim construction brief that we are somehow seeking to improperly to import the remaining portion of the above description, which is in reference to a preferred embodiment. In the second box, Defendants reference to this description in the specification relates to a preferred embodiment limited only to the YCrCb color format.

Now, this is incorrect for several reasons, Your

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Honor, and I believe that Your Honor has pointed out already
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    it's not -- it's in the patent specification, but more
     importantly -- and also, Your Honor, if we go to slide 16, just
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    so I can put our proposed construction, the Court's proposed
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    construction up, the construction uses the term chromatic
    components, not Cr, not Cb. It's chromatic components, and
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    chromatic components are not limited to the YCrCb about color
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    space.
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              Now, for example, if we could go to slide 21,
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    Plaintiff's expert agrees with the Defendants. He confirmed at
    his deposition that the term chromatic components is used in
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    various color spaces.
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              For example, he's asked, Are you familiar with YUV,
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    the YUV color space? Yes.
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              And you understand that chromatic components are used
    to refer to the UV portion of YUV; correct? Correct.
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              One thing I noticed on this, my apologies, Your
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            I believe that should be YUV. There is I guess a court
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    reporter error on this one.
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              And asked again, And are you also familiar with the
    YIQ color space? He says, I do.
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              And the term chromatic components refers to the IQ
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    portion of YIQ; is that correct? And he responds, Correct.
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              And if we turn to slide 20, Yosef Segman is the
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     inventor of both the '012 patent and the '435 patent. In the
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'435 patent, Mr. Segman states, In still another format, real
time digital video images feature colors or color components
characterized by linear combinations of the chromatic parts, Cr
and Cb, also known in the art as U and V, respectively, in
YCrCb or YUV respectively.
          So what we have here, Your Honor, is we have two
different people, Dr. Menczel and Mr. Yosef Segman, who are
more than persons of ordinary skill in the art, and they
understand that chromatic components are not limited to the
YCrCb color space. Thank you, Your Honor.
          THE COURT: And so it says in column 15, 9 through
63, it says increase or decrease the saturation of a single
color the chromatic part of the video image, e.g. CrCb, UV, or
IQ.
          MR. TING: Uh-huh.
          THE COURT: So that indicates to you that the
chromatic part applies to different color formats?
          MR. TING: Absolutely, Your Honor.
          THE COURT: So let me ask this: What do you think
the dispute here is? And I can ask the Plaintiff this, but
what's the -- why does the dispute here?
          And I -- you know, I know you have your individual
color argument related to indefiniteness, but taking that out
of it, what -- what's the heart of the dispute?
          MR. TING: The heart of the dispute, Your Honor, is
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to make sure that -- if I can do a bit of a background, Your Honor, and this is the case where I believe my colleague for Sharp has already pointed out that no one yet has the source code to actually know what's going on here.

And so, you know, as always in every case, but especially when we don't really know what the exact infringement theory is yet because they've relied on the -- you know, for certain source code limitations and the infringement contentions, you're allowed to in a way to delay, put of providing those until you can inspect the source code. At this point no source code has even been requested or subpoenaed.

But the importance here is very important for us to make sure that we construe these claims as accurately as possible to make sure that once the source code is reviewed, there's no room for error and there's no -- to minimize the amount of disputes later on as to whether an actual limitation has been met.

And if we look at -- slide 18, please. So we look at, you know, column six, 29 through 32 of the '012 patent where we see the genesis of both the Court's proposed and Defendants' proposed constructions, Plaintiffs have chose to focus only on the phrase used for digitized selective control of individual colors.

However, that doesn't tell us what the individual color control functions are or any details about them. All

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it's saying is that subsequently -- they're subsequently used for digitized selective control of individual colors, but that's the overall theme of the patent. It's not telling me anything that's going to be helpful to a jury to understand or to accurately reflect what individual color control functions are. What will help is what comes after, which is operating on linear combinations of values of the input image chromatic components, because this is actually telling me what the individual color control functions are going to do, and that in order for a function to meet this limitation or for a line of code, an equation to meet this specific limitation, it has to operate on linear combinations of values of the input image chromatic components. It cannot simply be something that is at sometime used for digitized selective control of individual colors. THE COURT: All right. Thank you. All right. Let me just briefly touch on this term and then move on to the next one. I quess for the Plaintiff I -- go ahead and let Mr. Saba come up. Okay. So the issue with regard -- first of all, there's a term, the definition is chromatic part of the video image, e.g. CrCb, UV, or IO, so why not define this? If the concern is UV or IQ, why define this with the chromatic components terminology, and then, furthermore, what is the

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issue here with regard to this term? MR. SABA: Yes, Your Honor. I believe the issue is that the patents do not specifically -- they're not specifically limited to a specific color format in the '012, and that by the inclusion of chromatic components, it would be narrowing the claim itself to apply it to a specific format. And we raised the issue of dependent three -- I think it was dependent three -- being in conflict with that narrowing because it would be our position it would be a violation of the claim differentiation, and so the issue is whether or not the claims are specific to a format. THE COURT: Okay. MR. SABA: Thank you. THE COURT: All right. Let's move to -- I think the next term is color control parameters. MR. TING: Your Honor, Defendants propose that color control parameters should be construed as the change of the output image chromatic component from the input chromatic component for a specific color. Go to slide 29. We're just highlighting where the term color control parameters appear in claim one, and it is in sub element F. In looking at slide 30, the Defendants' construction is guided and defined by the specification of the '012 patents specifically at column eight, lines 25 through 35.

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Now, in discussing the control parameter -- the color
control parameters, it states clearly that the color control
parameters are for relating the output image chromatic
component to input image chromatic components, and the
example --
          THE COURT: I guess let me stop you there because
we --
         MR. TING: Yes.
          THE COURT: The concern I have in looking at this
was, am I correct in saying that there is another parameter
that's specifically, you know, called out or identified, and
that being integer break point color control parameter? You're
talking about tangent color control parameter here?
         MR. TING: Right.
          THE COURT: From what I can tell, there's an integer
break point color control parameter that's involved here as
well. Is that not correct?
         MR. TING: That is correct, Your Honor.
          THE COURT: And so are we -- is your proposal
limiting the parameter to a tangent control or tangent color
control as opposed -- and not -- and excluding integer break
point?
         MR. TING: No, Your Honor.
          THE COURT: And why is that?
         MR. TING: I mean -- I meant we're not excluding
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1 that. 2 THE COURT: Well, I think the way I was reading it was, and the point you're putting up here, maybe you're getting 3 to it later, but -- so you're saying your proposal includes 4 5 both; is that correct? MR. TING: What I'm saying, Your Honor, is -- let me 6 7 be a little more clear. Our proposal is for the term color control 8 9 parameters, and we've used the specifications teaching, and 10 it's specifically talking in this situation about the tangent control parameters, but we are not limiting it to just the 11 tangent color control parameters. Our construction is relevant 12 13 to all color control parameters, whether it be the tangent or 14 the integer control. 15 THE COURT: Okay. Okay. Why is it necessary? 16 You know, another concern I have is, you know, 17 parameter is, I think, a word that's understandable. Why is it 18 necessary to define it? 19 MR. TING: It's necessary to define it, Your Honor, 20 because the color control parameter serves a specific function here, and that's reflected in our construction, which is that 21 22 the color control parameters are what actually reflect, you 23 know, the change from one color to another. The parameters are 24 going to be used in a color control functions to actually 25 determine what the actual output will be.

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So from, you know, column 8, 25 through 35, what we
see is you're going to relate the output image chromatic
component, Cr', to the inputs, and also you're going to relate
the output image chromatic components, Cb', to be input
chromatic components.
         Now, I understand that there might be some confusion
as to how we get from the relating to our construction of
change, but what these parameters are going to establish is the
relationship between the inputs and the outputs, and the inputs
and the outputs, the big difference between them is the change,
and that is what is going to be represented by these
parameters.
          THE COURT: Okay. Anything else?
          MR. TING: No, Your Honor.
          THE COURT: All right. Well, in response in that,
what the Defendant is highlighting for me is the fact -- that
what they're pointing out is these parameters deal with the
change of the output from the input.
          And if that's the case -- and maybe you disagree with
that, but if that's the case, then should the Court define the
term to specify for the jury what we're talking about here in
the parameter is the change between the two, output and input?
          MR. SABA: May I respond to that, Your Honor?
          THE COURT: Yes.
                    Okay. Your Honor, I want to start with --
          MR. SABA:
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look at -- quickly at claim one of the '012 patent with regard to the color control parameter term.

We talked about this earlier this morning, and that is that claim one recites a series of steps to selectively control an individual color; receiving, Step A; characterizing, Step B; C, selecting the individual color.

But then you get down to D, defining individual color look-up tables according to a color; and then Step E says -- specifies, defining a set of individual color control functions according to an individual color calculating values in said set of individual color look-up tables.

Step F, assigning values to color control parameters in said set of individual color control functions, and then G inserting those values to look-up table.

And so where I think there might be a misunderstanding that the parameter is not the value. I think the Defendants might be suggesting the parameter is a variable to use to control the function that derives values to go into the look-up table.

And you have -- if you'll go to the next slide.

Thank you. In this specification you have cited, well, isn't tangent the parameter? We believe that is the case. The parameter in this instance is TangentCr_ColorCr and TangentCrColor_Cb, which are contained within the control function which produces a value to be placed into the look-up

table. 1 2 So whereas a parameter takes plain and ordinary meaning, that being a variable that is assigned a value -- what 3 do we say? A variable that is -- variables that are given 4 5 value for color control function. It's not the actual change value itself. 6 THE COURT: All right. 7 Thank you. 8 MR. SABA: 9 THE COURT: Anything else on this? 10 MR. TING: No, Your Honor. THE COURT: All right. Let's move to -- I think the 11 12 next term is whereby all other colors of digital video input 13 image remain unchanged. 14 I think the dispute here has to do with colors or 15 pixels, so --MR. HOLOHAN: Your Honor, if the Court -- for the 16 17 Court's convenience, I've actually sort of combined this term 18 with what's listed as term seven on the Court's preliminary 19 claim construction, the without affecting the hue or saturation 20 of other individual color because I think the parties agree that the dispute over both of these terms is essentially the 21 22 same whether we want to talk about colors or pixels as well as 23 colors. 24 And if we -- if we can turn to slide 46, starting 25 with the claim language, the claim is clear that starting with

the '012 patent, claim one, the claim is quite clear that you are manipulating pixels in order to change colors. You input pixels. You take pixels out. You display them.

And the set of slides here, the next slide, please,

the '435 patent is similar. The word pixels appears several times in the claim. Next slide, please. And that just illustrates that.

And to explain why that would be helpful to the jury to specify that we are dealing with pixels and not just colors in the abstract, we can look at slide 44, and this, Your Honor, is a -- this is just a graphic from our tutorial demonstrating how colors are actually presented and created in a digital display.

If you look, this image here is a very, very deep zoom into the very small portion of video display, and if you were to zoom out, you would see a normal human eye with various colors.

But when you get in really close, you can see what you're looking at is pixels that have various values of red, green, blue, which was, I think, discussed earlier, but are combined to make colors.

And there's really no dispute -- I don't think there's a serious dispute, if you look at slide 49, that the patent and any conceivable implementation of the patent uses pixels to manifest the invention.

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Plaintiff's expert Dr. Menczel acknowledged that the implementation shown in the -- in the specification of these patents has to do with pixels, and when asked if there were any other implementations that would change colors without changing pixels, he just said there may be, there may not be. He couldn't come up with any when asked. So, Your Honor, we think that the jury -particularly as sort of dense as these claims are, I think the jury would be assisted in conceiving of these two terms as specifically operating on pixels in order to change colors, and that's why we proposed the construction we have. THE COURT: Now, how does this make any difference, I guess is my question? I mean, first of all, the term is color. Color and pixels are different; right? I mean, they're different terms. MR. HOLOHAN: Color and pixels mean two different things. THE COURT: And so why -- why does it matter? Again, the term is color. Why not -- why change that? Why is it necessary to do that? MR. HOLOHAN: Your Honor, as Mr. Ting mentioned, in part because we don't have the source code, we don't really know what we're aiming at. We want to be as precise as possible with the claims, and we want the jury to be able to understand when we talk

about manipulating colors in addition to whatever else that may 1 be going on behind the scenes in the look-up tables and the 2 3 values, if they are, in fact, in the code, that we are beginning and ending with pixels, and those pixels are actually 4 5 changing to manifest these changes in color, so it's really just an issue of being precise and being accurate and assisting 6 the jury. 7 THE COURT: All right. Thank you. Anything from the 8 Plaintiff on this? 9 10 MR. SABA: No, Your Honor. THE COURT: All right. Let's move to -- I think the 11 12 next term is arbitrary interval of integers. MR. HOLOHAN: Slide 73, please. Your Honor, on this 13 14 term, as explained in our briefing, we believe this term is 15 indefinite for the Defendants. When I asked Dr. Menczel what is the limit on the 16 17 range of integers given this term, he said it's arbitrary, 18 couldn't come up with any explanation beyond what the patent 19 itself -- what the claim term itself says. Arbitrary sort of 20 by definition is inherently vague and unhelpful term. If you look at the next slide, the specification '435 21 22 patent draws a distinction between a sort of principle 23 hypothetical implementation using an arbitrary range of 24 integers, and then it says for implementation we do it this 25 other way.

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So there's no teaching in the specification. I think the specification explicitly says that the use of an arbitrary range is only -- is sort of in principle conceptualization of the invention and the implementation you would need to define in some other way, which the claim fails to do. THE COURT: Okay. Anything else? MR. HOLOHAN: No, Your Honor. THE COURT: All right. Response? MR. SABA: Nothing on this point, Your Honor. All right. Let's move to the next term THE COURT: then, completely independent and separate. Thank you, Your Honor. Preliminarily the MR. SABA: Court has indicated that it believes the term is indefinite. I just want to walk through a couple of things in the specification. Actually beginning with the claim itself on completely independent and separate, the Plaintiff's position is that the term is not indefinite, and beginning with the comparison of claim one, which teaches selecting to independently change the hue or saturation of an individual color, by selecting an independent color hue control delta value or an independent color saturation control value. Or as claim eight recites, the method of claim one, whereby said independent color hue control delta value is completely independent and separate from said independent color

saturation control value.

It's a mouthful, but with regard to claim one of the '435 specification or -- excuse me -- with regard to claim one, the '435 specification describes an embodiment that might, for example, utilize one algorithm to effectuate a claim in either hue or saturation, but only one can be selected at a time.

And this is not on the slide, but it is at '435 column eight, lines 14 to 24, where the patent -- the specification cites according to the operative result Step E is that of selecting either an independent color hue control delta value.

It says HCR, which I believe means hue, color, or independent color saturation delta value, S being -- sorry, saturation color, which is not a zero, is where only one of the following is selected at a given time.

Whereas, with regards to claim eight, the specification describes alternative algorithms where hue control delta -- where a hue control delta value is completely independent and separate from the saturation control values affording more dynamic color changes.

In other words, the hue control delta value is not a function of the saturation control value as claimed by dependent eight.

So, for example, if one were to change one individual color red by 20 percent and then change saturation of that same

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individual color by 10 percent, or if in the same example one were to decrease the saturation of red by 30 percent and then change the saturation by 10 percent, in either case saturation will change the same amount in that because hue and saturation control deltas are completely and independent -- I'm sorry -- completely independent and separate, so completely independent and separate means not a function of one another.

This is all we have on this point, Your Honor.

THE COURT: Well, what I think the -- my concern here was really more focused on -- and I'm not sure you've addressed it -- but Step D of claim one, in that it talks about by separately evaluating independent color hue control functions or independent color saturation control functions.

And my concern was that it appeared to render claim eight, whereby said independent color hue control delta value clearly independent and separate seemed to render that superfluous. It's already in claim one, but I may be missing something.

MR. SABA: Your Honor, I think the focus is on and just discussing differences between claim one and claim eight is actually the hue control delta value; where, I guess, as I understand it, a delta control value can be -- can exist in one program or -- sorry -- one algorithm that can be used to change hue or saturation; whereas, claim eight describes two separate independent algorithms.

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I think we provided an example in our reply brief of
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    a different implementation where the control delta values are
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    separate.
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               THE COURT: Okay. All right. Any response?
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              MR. HOLOHAN: Very briefly, Your Honor.
               Just in terms of the differentiation between claim
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    one and claim eight, going back to column eight of the '435
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    patent, Mr. Saba read from lines 14 to about 24 of that column.
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               If you keep reading in that column, you'll see as
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    previously indicated above, a main aspect of the novelty of the
    present invention -- those are the magic phrase that means that
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    we're talking about a claim limitation -- is that enabling one
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    to independently control, that is to independently change or
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    adjust, by increasing or decreasing hue or saturation of each
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     individual color in a real time digital video image without
    affecting the hue or saturation of any other color in the same
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    real time digital video image.
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              And that, I think, supports the main point in our
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    brief, and as Your Honor seemed to indicate, claim one already
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    requires this limitation. Claim eight doesn't add anything.
    It is superfluous. It is confusing and, therefore, it's
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     indefinite.
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               THE COURT: All right. Thank you.
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              MR. HOLOHAN:
                            Thank you.
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               THE COURT: So let's see. I quess the last term is
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1 viewer. MR. TING: Thank you, Your Honor. I'll be quick on 2 3 this one. 4 We understand that Plaintiffs believe that this does 5 not require construction. The Defendants' proposed construction is that viewer be given its precise definition, 6 7 which is to be an actual person. And as we see here in claim 17, in C it says, A 8 9 viewer of said real time digital image display device operating 10 said master control device, and it goes on. The key here is, if we go to the next slide, the 11 12 Defendants' construction of viewer as a person is fully 13 supported by the specification and, in fact, is the only 14 conceivable interpretation of what a viewer is. 15 So as we see on slide 80 for columns 26, lines 21 through 65, we see every time it's being referred to as either 16 17 a user or a viewer. And just for example, there's terms a user 18 or viewer of a real time digital video image display device, 19 such as a television, selects to independently change hue. Or, 20 for example, you know, selected by the user or viewer, or within seconds, following the user or viewer pushing or 21 22 turning. 23 Now, Your Honor, the importance here for why the term 24 should actually be construed as a person instead of, you know, 25 not having construction, just having people understand that

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it's a person, is not just, you know, for the jury and not to try to avoid confusion given the term viewer is, you know, nowadays could be -- someone could interpret that or be confused that viewer could mean a software browser or something that's not a person. Now, more importantly why is because -- and let me just go through some more intrinsic support first, which is there's no confusion a viewer has to be a person and can't be, you know, a browser or software that allows someone to view pictures because it requires a natural physical activity to take place. So '435 patent, column 26, lines 21 through 37, by pushing or turning, you know, a dial; at column 26, lines 48 through 65, within seconds following the user or viewer pushing or turning, you know, all things that need to be done by a person. And next slide. And, you know, as Dr. Menczel, he agrees, you know. Now, at first he said -- I asked him, What would a person of ordinary skill in the art understand the term viewer to mean. He says, Exactly what it says. Follow up, But if I was going to ask you to tell me what the viewer is, what would you say? He said, Somebody that views. Did you say somebody that views? Uh-huh. So a person that view; correct? Correct.

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Okay. And then it appears that the Plaintiffs do not disagree that a viewer is a person. Their position appears to be that the Court does not -- that the Courts are not and should not be required to construe every limitation present. And in their reply from -- of the construction brief, no construction is necessary for viewer as the term will be readily understandable to the jury; however, Your Honor, it does need to get to the jury for at least this claim. Because a viewer is a person, claim 17 is invalid. If we look at -- if we look at claim 17, claim 17 is an -- it's an apparatus patent. It's a system claim. Now, viewer as a person cannot be part of the system. The viewer would be performing a method step because it says a viewer of said real time digital video image display device operating said master control device for selecting to independently change the hue or the saturation of an individual color. If you'll go back to that last slide, back to In the IPXL Holdings case, there was the following claim: The system of claim two, including an input means, wherein the

84. In the IPXL Holdings case, there was the following claim:
The system of claim two, including an input means, wherein the predicted transaction information comprises both a transaction type and transaction parameters associated with that transaction type, and the user uses the input means to either change the predicted transaction information or accept the displayed transaction type and transaction parameters.

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We have a claim that is identical in structure to the one we have now. We have a system claim that requires an action by an actual person.

Next slide, please. So the IPXL court held the following: Thus, it is unclear whether infringement of claim 25 occurs when one creates a system that allows the user to change the predicted transaction information or to accept the displayed transaction, or whether infringement occurs when the user actually uses the input means to change transaction information or uses the input means to accept a displayed transaction.

Because claim 25 recites both a system and the method for using the system, it does not apprise a person of ordinary skill in the art of its scope and it is invalid under section 112, paragraph two.

And that is why the Defendants request that -respectfully request that viewer actually be construed and be
given the construction of -- that's consistent with the
intrinsic evidence, which is the person, so that we can try to,
you know, reduce the burden on our clients as much as possible
and can serve as resources both for the Court and for both
parties.

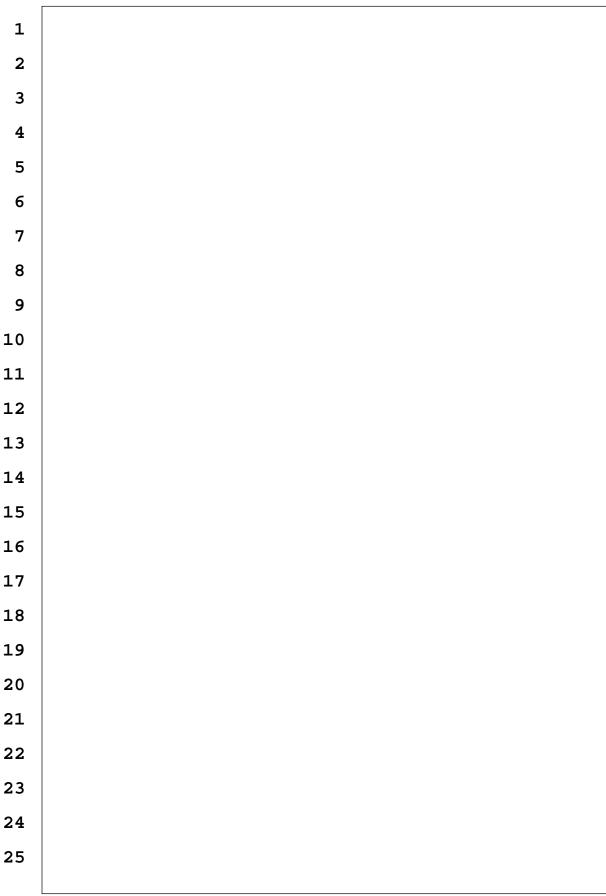
THE COURT: All right. Thank you. Plaintiff respond to -- really what I want to hear is the response to the contention that this claim should a viewer be a person is

invalid. 1 2 MR. LEE: Your Honor, this issue has been raised for the first time by the Defendants. They -- this is the first 3 4 time we've heard of it. 5 They were required to disclose their indefinite arguments under Rule 33 disclosures on June 10th. We went 6 7 through the whole claim construction process exchanging proposed constructions. They proposed the term viewer. Not 8 9 once have they mentioned this argument. It's only here today 10 for the first time at this Markman hearing they have raised it. The Plaintiffs are not in a position with this argument right 11 12 now to respond. 13 THE COURT: All right. Response? 14 MR. TING: Your Honor, we are not asking at this 15 time, you know, for the Court to find the patent's invalid. We're just asking for the construction of a person so we can 16 17 move down the path towards trying to resolve this. 18 We're not -- we are not attempting to ambush, you 19 know, Plaintiffs in any way. We just want the construction to 20 be a person. In fact, we contacted them after the deposition testimony and asked them if they would stipulate to this 21 22 construction and they refused. 23 THE COURT: All right. Well, -- all right. I don't 24 think there's anything further I need to cover on this. 25 All right. I believe that concludes the terms that

were in dispute today. Anything further from the Plaintiff? 1 2 MR. SABA: Nothing at this time, Your Honor. THE COURT: Anything further from the Defendant? 3 MR. HOLOHAN: No, Your Honor. 4 5 MR. TING: No, Your Honor. THE COURT: Let me do mention one thing. There was 6 7 some discussion here about tutorials, software, code, and I'm assuming that that is in process of being produced or being 8 9 sought. Is the Plaintiff seeking software from the 10 manufacturers or the -- of these color components and these devices? 11 MR. LEE: Your Honor, we are. In fact, we've asked 12 13 Sharp Corporation or Sharp to provide the documentation from 14 Sharp Corporation, but with the parent in Japan, Sharp is 15 taking the position that it's all through third party chip 16 makers. 17 We are in the process of severing subpoenas to the 18 chip makers that have been identified in interrogatories by the 19 Defendants. The chip makers -- or most of the chip 20 manufacturers are outside the United States, so it will take 21 time. 22 THE COURT: Okay. Well, I'm just encouraging the 23 expeditious conduct here. Your deadline for fact discovery, as 24 far as I can tell, I believe is March 27th, so that will be 25 here rapidly.

So I'm just saying we're here at Claim Construction 1 2 and I'm hearing we don't have software produced and haven't 3 been looked at, and I don't know whether contentions will 4 change, so you really need to get on that and get that looked 5 at and lined out quickly, you know. Your trial date is in August, I believe, of next 6 7 year, which would put your pretrial in July, you know. Dispositive motions, it looks like they're due in May, so, you 8 9 know, I just -- you need to get on that and get that done 10 quickly because we don't want to extend this out, you know. Ιt just needs to get done, so -- okay. All right. 11 12 Anything from the Defendants on this? 13 MR. HOLOHAN: On that point, Your Honor? 14 THE COURT: Yes. 15 MR. HOLOHAN: Just briefly, and I don't know if there 16 actually is a dispute. In any case, just to be clear, Sharp 17 Corporation is not a party to the case. Sharp Electronic 18 Corporation is the party, and we've produced the technical 19 documentation that we have. 20 A long time ago, several weeks, if not months ago, we identified the suppliers of the chips and also produced 21 22 technical documentation showing the chips that were in the 23 accused products on the part of SEC, so they have had this 24 information. I just don't want there to be an impression that 25 SEC is holding up that process.

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THE COURT: All right. All right. Well, again, I
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    don't know how much software source code will implicate the
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     infringement contentions here and the experts.
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              But to the extent that that is part of this case, I
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    quess my encouragement is to move that along, get that on the
    third parties, whoever has it, look at it, get your experts to
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    weigh in or your contentions lined out, however that falls.
               I know that a lot of times that can be an involved
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    process, and I'm just -- you know, we're sitting here in
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    November with a trial date in August and, you know, dispositive
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    motions due in May, so I'm just a little concerned about where
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    we are here.
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              But get that sought, get it secured and reviewed
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    under whatever protective orders are appropriate. Obviously
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    there's one in place here; correct? So --
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              MR. SABA: That's correct, Your Honor.
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               THE COURT: So the protective order will be in place,
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    and hopefully that can be produced without difficulty, and
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    so --
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              All right. There being nothing further, thank you
    for your arguments. We'll get your rulings as soon as we can.
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22
    Adjourned.
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              COURT SECURITY OFFICER: All rise.
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               (Hearing concluded.)
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1	CERTIFICATION
2	I HEREBY CERTIFY that the foregoing is a true and
3	correct transcript from the stenographic notes of the
4	proceedings in the above-entitled matter to the best of my
5	ability.
6	
7	Date: 11/10/16 Tammy L. Goolsby, CSR
8	Deputy Official Court Reporter State of Texas No.: 3101
9	Expiration Date: 12/31/16
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